



KEY ISSUES AT A GLANCE

- The drawdown of ISAF forces presents significant environmental concerns from military pollution at former bases and ranges.
- There is concern over the level of access for Afghanistan's environmental authorities to military bases, and to ISAF data on environmental quality from baseline and closure environmental studies.
- Private Military Security Contractors continue to play a significant role but liability for environment damage caused during their operations is poorly defined.
- Existing political and military agreements between ISAF forces and the Afghan government do not make reference to liability for environmental contamination caused during operations.
- There is a need for a common and robust environmental protection standard across all ISAF forces.
- There is a pressing need for stronger language in the ISAF mandate to ensure that responsibility is taken by ISAF for environmental protection during and after the closure of military installations.

INTRODUCTION

The UN mandated International Security Assistance Force (ISAF) has been deployed in Afghanistan since 2001 under the authority of United Nations Security Council (UNSC) Resolution 1386. In August 2003, NATO assumed command of the operation and its mandate has been repeatedly extended by the UNSC. During the 2010 Lisbon Summit, NATO agreed to begin a process of transitioning full responsibility for national security to Afghanistan.

The transition is due to end in 2014 and has involved a significant reduction in troop numbers. At the height of operations in May 2011 there were approximately 142,400 ISAF troops deployed to Afghanistan (100,000 of whom were US personnel), and 101,789 private contractors¹. In April 2014 this was down to approximately 47,600 ISAF troops, although as of April 2014 the presence of private contractors remained high at 61,452 contractors in the country².

1. I.S. Livingston and M. O'Hanlon (2014) Afghanistan Index, Brookings, May 14, 2014. Available at: <http://www.brookings.edu/~media/Programs/foreign%20policy/afghanistan%20index/index20140514.pdf>

2. *Ibid.*

More than 1200 ISAF-occupied properties are expected to be closed and handed back by the end of 2014³. Properties include Airbases, Forward Operating Bases (FOB), Main Operating Bases, Combat Outposts, Firebases or Fire Support Bases and Patrol Bases.

Military bases are known to leave a toxic footprint. This has been a significant issue both domestically in the US⁴ and abroad in countries hosting military bases such as South Korea⁵, the Philippines⁶ and Panama⁷. While contingency operations differ slightly, there is a strong indication that military pollution will be left in Afghanistan as a result of

3. Maj. A. Bouchard, USAF (2013) Environmental Protection in ISAF and KFOR. Joint Force Command Headquarters Naples, Engineer Branch. Slide 21. Available at: <https://pfpcconsortium.org/system/files/13.05.13%200800%20-%20%200900%20EP%20in%20Afghanistan.pdf>

4. Warsta, M. (Eds.). (2013) European Conference of Defence and the Environment, Conference Proceedings.

5. Chae, Y.G. (2010) Environmental contamination at U.S. military bases in South Korea and the responsibility to clean up. *Environmental Law Reporter*.

6. Bayanihan Foundation Worldwide, Toxic Wastes Left Behind at the former US Military Installations in Clark and Subic, Philippines. Available at: http://globaldale.files.wordpress.com/2011/11/toxic_wastes_facts-figures-nov-12-2011.pdf

7. Lindsay-Poland, J. (2003) *Emperors in the Jungle: The Hidden History of the US in Panama*. Duke University Press.

ISAF's activities there, potentially placing Afghan civilians and the environment at risk. It is therefore essential that ISAF takes steps to avoid this legacy.

This briefing examines a range of toxic remnants of war that could impact installations in Afghanistan as a result of the drawdown. It also considers current agreements in respect to environmental liability. It will demonstrate a policy gap that could unjustly impact Afghani citizens and that should be addressed in the new ISAF mandate.

ISAF FORCES IN AFGHANISTAN

ISAF forces comprise troops from 48 nations⁸. The largest force within ISAF by a very wide margin is the United States (US). While the vast majority of ISAF installations are run by the US Army, a number of other states have maintained installations in Afghanistan including: Canada, UK, France, Poland, Germany, Norway, Australia, Netherlands and Italy.

Alongside the military, there are a substantial number of Private Military Security Companies (PMSCs) operating in Afghanistan, they are engaged in a broad spectrum of security and support services. In April 2014, the ratio of contractors to US soldiers in Afghanistan was 2:1⁹. It is likely that after the majority of ISAF troops leave Afghanistan, many private contractors will remain¹⁰.

TRW FROM MILITARY INSTALLATIONS

The tables in ANNEX 1 and 2 provide examples of the risks from and sources of pollution from military installations. While environmental protection policies have improved during the last decade there is still potential for long-term environmental damage and risks to civilian health.

8. Afghanistan, ISAF, Troop numbers and contributions. Available at: <http://www.isaf.nato.int/troop-numbers-and-contributions/index.php>

9. 61,452 contractors and 30,000 US troops according to figures in I.S. Livingston and M. O'Hanlon (2014) Afghanistan Index, Brookings, May 14, 2014. Available at: <http://www.brookings.edu/~media/Programs/foreign%20policy/afghanistan%20index/index20140514.pdf>

10. Shorrock T.(2014) Exclusive: New document details America's war machine — and secret mass of contractors in Afghanistan. Salon, WEDNESDAY, MAY 28, 2014. Available at: http://www.salon.com/2014/05/28/exclusive_new_document_details_americas_war_machine_and_secret_mass_of_contractors_in_afghanistan/

There is a need for greater scrutiny and transparency over the environmental footprint of ISAF installations. However there has been some concern over the lack of access for Afghan environmental authorities to military bases. Complete access to data from environmental baseline and closure studies must also be provided. Support may also be needed to ensure that the Afghan authorities have the capacity to verify environmental data from these studies.

A further concern relates to the use of PMSCs to support ISAF operations. In Iraq and elsewhere, the routine use of contractors and sub-contractors has led to environmental oversight and accountability problems¹¹.

CURRENT AGREEMENTS

The ISAF Security Council mandate, which has been extended on an annual basis since 2001, currently contains no environmental protection language.

The separate ISAF Military Technical Agreement (MTA)¹² (2002) is a political agreement between ISAF and the Afghan government. It too does not make specific reference to liability for military-origin environmental contamination. It does state that forces will '*respect the laws of Afghanistan*' as far as they are compatible with the UNSC mandate but that ISAF will not be liable for property damage.

The US also has a separate Status of Forces Agreement with Afghanistan (SOFA)¹³ agreed in 2003. This document makes no mention of environmental protection and states that Afghanistan and the US '*waive any and all claims against each other for damage to or loss or destruction of property owned by either party...*'¹⁴

While Afghanistan's environmental law was strengthened in 2007, as of 2008 this had not been translated into US military policy.¹⁵ To interpret Afghani Law into US policy,

11. Avant, D. D., & de Nevers, R. (2011). Military Contractors & the American Way of War. *Daedalus*, 140(3), 88-99.

12. ISAF Military Technical Agreement, available at: <http://webarchive.nationalarchives.gov.uk/+http://www.operations.mod.uk/isafmta.pdf>

13. Agreement regarding the status of United States military and civilian personnel of the U.S. Department of Defense present in Afghanistan in connection with cooperative efforts in response to terrorism, humanitarian and civic assistance, military training and exercises, and other activities, 28 May 2003. Available at: http://psm.du.edu/media/documents/us_regulations/sofas/us_sofa_afghan.pdf

14. *Ibid.*

15. S.G. Loertscher (2008) Department of Defense Environmental Policy in Afghanistan During Operation Enduring Freedom. George Washington University School of Law.

final governing standards (FGS) for pollution and waste must be developed. However the US is not required to develop FGS in contingency operations and it is unclear whether these have been developed since 2008. It is also unclear whether Afghanistan's National Environmental Protection Agency (ANEP) has the analytical capacity to ensure that ISAF forces are respecting Afghanistan's national environmental law. Furthermore the current SOFA agreement between the US and Afghanistan allows the US to escape liability for environmental damage.

Environmental protection standards are not specified in ISAF policy OPLAN 38302¹⁶. NATO environmental protection policy¹⁷ does however provide guidelines, principles and policies for environmental protection¹⁸. NATO policy establishes that host nation law should be respected but states are not bound by the policy and each NATO sending nation is responsible for the actions of their own troops. This means environmental protection is devolved to each troop contributing nation, all of whom have different approaches and standards.

Environmental agreements are not without precedent. In 2015 new agreements between NATO, the US and Afghanistan are expected to be signed that outline the status of foreign forces in Afghanistan for the next ten years. These agreements include:

- US-Afghanistan Bilateral Security Agreement (BSA), in negotiation¹⁹.
- NATO-Afghanistan SOFA, in negotiation²⁰.

The draft US-Afghan BSA does cover environmental issues and is an improvement on the existing SOFA agreement. Draft language includes: *'due regard for environmental*

protection and human health and safety', 'a preventative rather than reactive approach' to environmental protection, and notes a prompt approach to dealing with spills and other environmental incidents that have substantive impact. The agreement also notes a sentiment of *'working to improve'* contractor transparency, accountability and effectiveness. And as noted in the previous agreement Afghan law is to be respected.

While the BSA has more detail, some positive language and awareness of environmental contamination problems, it lacks teeth. It is also not retrospective and, if the language is approved, will only apply to future pollution incidents. Crucially, the agreement avoids specifying terms on the condition of returned bases, instead noting that the parties *'shall consult'* on these terms.

CONCLUSION

As the military operations in Afghanistan draw to a close, it is becoming apparent that there is a significant risk that ISAF forces will leave behind toxic remnants of war that threaten both environmental and public health.

Key issues are:

- Existing political agreements have specifically avoided liability for property damage.
- There are no commonly agreed environmental protection standards between ISAF forces.
- Inadequate environmental oversight and management of private contractors and sub-contractors.
- There is a lack of capacity and access for Afghan organisations to assess contamination.

The implications of issues highlighted are:

- Health risks to civilians, particularly vulnerable groups such as pregnant women and children.
- Ecological risk to the environment and the livelihoods of those that depend on it.
- Political risk to NATO over the liability for any contamination remaining on returned bases.

16. Maj. A. Bouchard, USAF (2013) Environmental Protection in ISAF and KFOR. Joint Force Command Headquarters Naples, Engineer Branch. Slide 9. Available at: <https://pfpc Consortium.org/system/files/13.05.13%200800%20-%20%200900%20EP%20in%20Afghanistan.pdf>

17. Military Committee document 469, Principles and Policies for Environmental Protection, Standardization Agreements (STANAG) 7141 (Joint NATO Doctrine for Environmental Protection During NATO Led Military Activities), 2510 (Joint NATO Waste Management Requirements During NATO-Led Military Activities), and 7102 (Environmental Protection Handling Requirements for Petroleum Handling Facilities and Equipment).

18. NATO Legal Deskbook, Second Edition, 2010.

19. Security and defence cooperation agreement between the United States of America and the Islamic Republic of Afghanistan, pre-decisional document as of November 2013. Available at: <http://mfa.gov.af/Content/files/2013-11-18%20BSA%20TEXT.pdf>

20. NATO website, ISAF Ministers discuss Afghan mission progress and post-2014 planning, 27 February 2014. Available at: http://www.nato.int/cps/en/natolive/news_107519.htm

RECOMMENDATIONS

1) INTRODUCE LANGUAGE TO THE ISAF

MANDATE that ensures responsibility is taken by ISAF for the environmentally responsible closure of military installations.

2) ISAF POLICY NEEDS TO CLARIFY AND APPLY

COMMON ENVIRONMENTAL STANDARDS based on Afghani Law or that of troop contributing nations (whichever is most stringent).

3) CLARITY IS NEEDED ON THE ENVIRONMENTAL

LIABILITY OF PMSCS, and increased efforts to ensure capacity for environmental oversight and management.

4) ISAF SHOULD PROVIDE FULL ACCESS FOR

ANEPA to baseline environmental surveys and closure reports.

5) PROVIDE TECHNICAL ASSISTANCE to ANEPA

for verification of environmental quality in and around ISAF installations.

ANNEX 1 TRW ACTIVITIES, RISKS AND SUBSTANCES

TRW EVENT	DESCRIPTION	RISK OF HARM, EXPOSURE AND CONTAMINATION	SUBSTANCES OF POTENTIAL HARM
SCRAP METAL TRADE	<ul style="list-style-type: none"> Collecting UXOs on abandoned firing ranges provides a source of income. Munitions, military vehicles and materiel are all sources of scrap metal. 	<ul style="list-style-type: none"> Contaminated scrap metal can be sold on, potentially exposing more people to toxic substances and metals. Releases into atmosphere and leaching into soils and groundwater. 	<ul style="list-style-type: none"> Heavy metals: Pb, Hg. Explosive compounds: such as TNT, RDX and HMX are also common.
ABANDONED FIRING RANGES	<ul style="list-style-type: none"> ISAF ranges have not been completely cleared of UXOs. Not all locations of firing ranges are known to demining agencies. 	<ul style="list-style-type: none"> UXOs pose immediate explosive threat to people entering abandoned ranges. Children often most at risk Exposure to heavy metals, explosive residues and breakdown products via groundwater. 	<ul style="list-style-type: none"> TNT, RDX, HMX 2ADNT, 4ADNT residues are commonly found at firing ranges. Heavy metals: Pb and Hg also common.
ISAF FORCES BASE CLEARANCE AND SCRAPPING OF GOODS	<ul style="list-style-type: none"> ISAF presence for 13 years has led to the creation of diverse waste streams. Unwanted and bulky items at bases are being shredded and scrapped to save cost of returning to countries of origin. 	<ul style="list-style-type: none"> Contact with skin through handling metals during recycling or processing. Risk of explosion when melting down scrap. Pollution through inappropriate disposal. 	<ul style="list-style-type: none"> PCBs, PAHs in electrical items. Heavy metals in electrical items and vehicles Cr, Cd, Pb, Hg.
BURN PIT WASTE DISPOSAL	<ul style="list-style-type: none"> Unwanted and unnecessary items are burnt in large pits that are fired by fuels. 	<ul style="list-style-type: none"> Atmospheric contamination due to burning. Exposure via inhalation. Deposition of airborne particulates on ground and in water systems. 	<ul style="list-style-type: none"> Dioxins and PAHs from burning of plastics VOCs from burning of fuels, paints. Particulate matter from fires.
STOCKPILE MANAGEMENT	<ul style="list-style-type: none"> Destruction of surplus munitions by open burn /open detonation and burning. 	<ul style="list-style-type: none"> Atmospheric release of partially combusted explosive compounds. 	<ul style="list-style-type: none"> RDX, HMX, TNT, breakdown products Heavy metals including Pb, Hg, Cd.
CONTAMINATION FROM SPILLS AT ISAF BASES	<ul style="list-style-type: none"> Aviation and ground vehicle fuel spills 	<ul style="list-style-type: none"> Soil and groundwater contamination. 	<ul style="list-style-type: none"> VOCs, Benzene (carcinogenic), PAHs. benzo[a]pyrene, gasoline, diesel fuel and fuel oil.
HUMAN WASTE AND WASTE WATER DISPOSAL	<ul style="list-style-type: none"> Burning of solid wastes in burn out latrines Storage of solid wastes in cess pools 	<ul style="list-style-type: none"> Risk of contamination if cess pools are poorly lined. No treatment of waste, just storage Odour. 	

ANNEX 2 TRW SUBSTANCES AND HEALTH

TRW EVENT	SUBSTANCE	POTENTIAL HEALTH IMPACT
<ul style="list-style-type: none"> • SCRAP METAL TRADE • ABANDONED FIRING RANGES • ISAF SCRAP CLEARANCE • STOCKPILE MANAGEMENT 	<ul style="list-style-type: none"> • Lead (Pb) 	<ul style="list-style-type: none"> • Damage to central nervous system • Long term exposure can lead to anaemia • Sperm damage • Harm to developing foetuses
<ul style="list-style-type: none"> • SCRAP METAL TRADE • ABANDONED FIRING RANGES • ISAF SCRAP CLEARANCE • STOCKPILE MANAGEMENT 	<ul style="list-style-type: none"> • Mercury (Hg) 	<ul style="list-style-type: none"> • Ingestion impacts digestive tract • Causes renal damage • Effects the cardiovascular system • Eye irritation and complaints • Brain damage • Kidney damage • Harm to developing foetuses
<ul style="list-style-type: none"> • SCRAP METAL TRADE • ABANDONED FIRING RANGES • ISAF SCRAP CLEARANCE • STOCKPILE MANAGEMENT 	<ul style="list-style-type: none"> • Cadmium (Cd) 	<ul style="list-style-type: none"> • Vomiting, abdominal pain and diarrhoea • Impacts nervous system, liver and cardiovascular system • Prevents kidney uptake of vitamin D - bone disease • Can cause renal failure and death • Inhalation can cause bronchitis and other lung illnesses. • Carcinogenic to humans - IARC Group 1
<ul style="list-style-type: none"> • STOCKPILE MANAGEMENT • ABANDONED FIRING RANGES 	<ul style="list-style-type: none"> • RDX 	<ul style="list-style-type: none"> • Seizures, convulsions • Dizziness and vomiting • Neurological symptoms: lethargy, muscle twitching, hyper-irritability
<ul style="list-style-type: none"> • STOCKPILE MANAGEMENT • ABANDONED FIRING RANGES 	<ul style="list-style-type: none"> • TNT 	<ul style="list-style-type: none"> • Anaemia • Abnormal liver function
<ul style="list-style-type: none"> • STOCKPILE MANAGEMENT • ABANDONED FIRING RANGES 	<ul style="list-style-type: none"> • HMX 	<ul style="list-style-type: none"> • Animal studies suggest possible damage to liver and central nervous system
<ul style="list-style-type: none"> • STOCKPILE MANAGEMENT • ABANDONED FIRING RANGES 	<ul style="list-style-type: none"> • Dinitrotoluenes (Breakdown products of TNT in natural environment). 	<ul style="list-style-type: none"> • Long term exposure can lead to heart disease • Anoxia • Jaundice • Reproductive effects • Considered a possible human carcinogen - IARC Group 2B
<ul style="list-style-type: none"> • FUEL SPILLS • BURN PIT WASTE DISPOSAL 	<ul style="list-style-type: none"> • Benzene 	<ul style="list-style-type: none"> • Carcinogenic to humans - IARC Group 1
<ul style="list-style-type: none"> • FUEL SPILLS 	<ul style="list-style-type: none"> • Benzo[a]pyrene 	<ul style="list-style-type: none"> • Probable carcinogen to humans- IARC Group 2A
<ul style="list-style-type: none"> • FUEL SPILLS 	<ul style="list-style-type: none"> • Diesel fuel 	<ul style="list-style-type: none"> • Possibly carcinogenic to humans - IARC Group 2B
<ul style="list-style-type: none"> • FUEL SPILLS 	<ul style="list-style-type: none"> • Gasoline/petrol 	<ul style="list-style-type: none"> • Possibly carcinogenic to humans - IARC group 2B • Long term exposure can affect nervous system